**Report Date:** 07 Oct 2013

**Summary Report for Individual Task**
**052-204-2303**
**Perform Primary Voltage Live-Line Testing**
**Status: Approved**

---

**Condition:** As a Power Line DistributionSpecialist in a tactical or nontactical environment when the Primary side inlive-line distribution equipment needs to be tested, you are given a one-line diagram, the applicable climbing and rigging equipment, hot-line tools, a voltage detector, a clamp-on amp meter, safety standing operating procedures (SOPs), the applicable manufacturer's literature, the Lineman's and Cableman's Handbook (LCH), applicable personal protective equipment (PPE), insulating protective equipment, electrical construction prints, wiring diagrams, and DA Form 2702 (Bill of Materials). This task should not be trained in MOPP.

**Standard:** Perform Primary Voltage live-line testing to determine whether the line is energized.

**Special Condition:** None

**Safety Level:** Low

**MOPP:** Never

**Task Statements**

**Cue:** None

## DANGER

1. THIS TASK SHOULD ONLY BE PERFORMED BY QUALIFIED PERSONNEL KNOWLEDGEABLE IN THE INSTALLATION, OPERATION, AND MAINTENANCE OF MEDIUM-VOLTAGE, ELECTRICAL POWER GENERATION EQUIPMENT, AND THE ASSOCIATED HAZARDS. FAILURE TO COMPLY MAY CAUSE PERMANENT INJURY OR DEATH.

2. A VOLTAGE DETECTOR SHOULD BE USED TO ENSURE THAT THE CABLES ARE NOT ENERGIZED. MATERIAL (SUCH AS A LEAD SHEATH THAT ACTS AS A SHIELD) MUST NOT BE BETWEEN THE TESTER AND THE CONDUCTORS OF THE CIRCUIT BEING TESTED. FAILURE TO TEST THE CABLES MAY CAUSE PERMANENT INJURY OR DEATH.

## WARNING

None

## CAUTION

None

**Remarks:** All required Prime Power specific references and technical manuals will be provided by the local Prime Power Command.

**Notes:** None

**Performance Steps**

1. Review danger, warning, and caution notices before proceeding.

2. Review the manufacturer's literature, electrical construction prints, and wiring diagrams.

3. Ensure that PPE, hot-line equipment, and test equipment is correctly tested and fully mission-capable.

4. Ensure that personnel are safely positioned or removed from the area to be tested.

5. Perform an initial equipment self-test.

6. Test each primary side phase conductor or circuit part with adequately rated test equipment.

    a. Check a known energized circuit to ensure that the test equipment is working correctly.

    b. Check a known de-energized circuit to ensure that the test equipment is working correctly.

    c. Test the identified energized circuit, and verify the test results.

7. Ensure that the items listed in the conditions are properly cleaned and stored.

(Asterisks indicates a leader performance step.)

**Evaluation Preparation:** Provide the Soldier with the items in the conditions. Give the Soldier a safety briefing before starting, and ensure that all safety precautions are followed. Prepare area and equipment in advance to ensure that the task standards can be met.

| PERFORMANCE MEASURES | GO | NO-GO | N/A |
|---|---|---|---|
| 1. Reviewed danger, warning, and caution notices before proceeding. | | | |
| 2. Reviewed the manufacturer's literature, electrical construction prints, and wiring diagrams. | | | |
| 3. Ensured that PPE, hot-line equipment, and test equipment was correctly tested and fully mission-capable. | | | |
| 4. Ensured that personnel were safely positioned or removed from the area to be tested. | | | |
| 5. Performed an initial equipment self-test. | | | |
| 6. Tested each primary side phase conductor or circuit part with adequately rated test equipment. | | | |
| 7. Ensured that the items listed in the conditions were properly cleaned and stored. | | | |

**Supporting Reference(s):**

| Step Number | Reference ID | Reference Name | Required | Primary |
|---|---|---|---|---|
| | DA FORM 2702 | Bill of Materials | Yes | No |
| | EM 385-1-1 | Safety and Health Requirements. | No | No |
| | ER 385-1-31 | Safety & Occupational Health. The Control of Hazardous Energy (Safe Clearance). | No | No |
| | FM 5-412 | PROJECT MANAGEMENT | No | No |
| | LCH | The Lineman's and Cableman's Handbook, 11th Edition, McGraw-Hill. 2007 | Yes | No |
| | TM 3-34.45 | ENGINEER PRIME POWER OPERATIONS | No | No |
| | TM 5-682 | Facilities Engineering: Electrical Facilities Safety. | No | No |
| | TM 5-684 | Facilities Engineering - Electrical Exterior Facilities. NAVFAC MO-200/AFJMAN 32-1082. | No | No |
| | TM 5-811-1 | Electric Power Supply and Distribution {AFJMAN 32-1080} | No | No |
| | TM 5-811-3 | Electrical Design: Lightning and Static Electricity Protection. AFM 88-9, Chap 3. | No | No |

**Environment:** Environmental protection is not just the law but the right thing to do. It is a continual process and starts with deliberate planning. Always be alert to ways to protect our environment during training and missions. In doing so, you will contribute to the sustainment of our training resources while protecting people and the environment from harmful effects. Refer to FM 3-34.5 Environmental Considerations and GTA 05-08-002 ENVIRONMENTAL-RELATED RISK ASSESSMENT. Environmental protection is not just the law but the right thing to do. It is a continual process and starts with deliberate planning. Always be alert to ways to protect our environment during training and missions. In doing so, you will contribute to the sustained of our training resources while protecting people and the environment from harmful effects. Refer to FM 3-34.5 Environmental Considerations and GTA 05-08-002 ENVIRONMENTAL-RELATED RISK ASSESSMENT.

**Safety:** In a training environment, leaders must perform a risk assessment in accordance with FM 5-19, Composite Risk Management. Leaders will complete a DA Form 7566 COMPOSITE RISK MANAGEMENT WORKSHEET during the planning and completion of each task and sub-task by assessing mission, enemy, terrain and weather, troops and support available-time available and civil considerations, (METT-TC). Note: During MOPP training, leaders must ensure personnel are monitored for potential heat injury. Local policies and procedures must be followed during times of increased heat category in order to avoid heat related injury. Consider the MOPP work/rest cycles and water replacement guidelines IAW FM 3-11.4, Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical (NBC) Protection, FM 3-11.5, Multiservice Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Decontamination. Everyone is responsible for safety. A thorough risk assessment must be completed prior to every mission or operation.

**Prerequisite Individual Tasks :**

| Task Number | Title | Proponent | Status |
|---|---|---|---|
| 052-204-1115 | Rescue an Injured Victim From a Manhole | 052 - Engineer (Individual) | Approved |
| 052-204-1203 | Perform Operator Preventive-Maintenance Checks and Services (PMCS) on a Bucket/Material Handler Truck | 052 - Engineer (Individual) | Approved |
| 052-204-1125 | Operate a Line Truck with Auxiliary Equipment | 052 - Engineer (Individual) | Approved |
| 052-204-1128 | Interpret an Electrical One-Line Diagram | 052 - Engineer (Individual) | Analysis Completed |
| 052-204-1117 | Inspect Hot-Line Equipment | 052 - Engineer (Individual) | Approved |
| 052-204-1114 | Rescue an Injured Victim From a Utility Pole | 052 - Engineer (Individual) | Approved |
| 052-204-1124 | Climb a Utility Pole | 052 - Engineer (Individual) | Approved |

| | | | |
|---|---|---|---|
| 052-204-1116 | Rescue an Injured Victim From an Aerial-Bucket Truck | 052 - Engineer (Individual) | Approved |
| 052-204-1108 | Inspect Safety Equipment | 052 - Engineer (Individual) | Analysis Completed |
| 052-204-1119 | Perform Operator Preventive-Maintenance Checks and Services (PMCS) on a Line Truck With Auxiliary Equipment | 052 - Engineer (Individual) | Approved |
| 052-204-1113 | Prepare a Manhole for Safe Entry | 052 - Engineer (Individual) | Approved |
| 052-204-1202 | Maintain Rigging/Hoisting Equipment | 052 - Engineer (Individual) | Approved |

**Supporting Individual Tasks :**

| Task Number | Title | Proponent | Status |
|---|---|---|---|
| 052-204-1126 | Perform a Crossarm Change Out | 052 - Engineer (Individual) | Superseded |
| 052-204-1120 | Install a Grounding Set | 052 - Engineer (Individual) | Superseded |
| 052-204-1203 | Perform Operator Preventive-Maintenance Checks and Services (PMCS) on a Bucket/Material Handler Truck | 052 - Engineer (Individual) | Approved |
| 052-204-2213 | Locate an Underground Cable and/or a Fault | 052 - Engineer (Individual) | Superseded |
| 052-204-1122 | Install Distribution Equipment (De-energized) | 052 - Engineer (Individual) | Approved |
| 052-204-1121 | Install High-Intensity Lights and Ballasts | 052 - Engineer (Individual) | Superseded |
| 052-204-1123 | Secure Conductor to Insulator (De-energized) | 052 - Engineer (Individual) | Superseded |
| 052-204-2216 | Perform Maintenance on Electrical Distribution Equipment | 052 - Engineer (Individual) | Superseded |
| 052-204-1123 | Secure Conductor to Insulator (De-energized) | 052 - Engineer (Individual) | Approved |
| 052-204-2209 | Install Distribution Equipment (Energized) | 052 - Engineer (Individual) | Approved |
| 052-204-1116 | Rescue an Injured Victim From an Aerial-Bucket Truck | 052 - Engineer (Individual) | Approved |
| 052-204-2210 | Secure Conductor to Insulator (Energized) | 052 - Engineer (Individual) | Superseded |
| 052-204-1212 | Operate a Bucket/Material Handler Truck | 052 - Engineer (Individual) | TMD Review |

**Supported Individual Tasks :**

| Task Number | Title | Proponent | Status |
|---|---|---|---|
| 052-204-2216 | Perform Maintenance on Electrical Distribution Equipment | 052 - Engineer (Individual) | Approved |
| 052-204-2304 | Perform Secondary Voltage Live-Line Testing | 052 - Engineer (Individual) | TMD Review |
| 052-204-1215 | Splice a Medium-Voltage Overhead Power Cable | 052 - Engineer (Individual) | Approved |
| 052-204-1214 | Terminate a Medium-Voltage URD Power Cable | 052 - Engineer (Individual) | Approved |
| 052-204-1121 | Install High-Intensity Lights and Ballasts | 052 - Engineer (Individual) | Approved |
| 052-204-1123 | Secure Conductor to Insulator (De-energized) | 052 - Engineer (Individual) | Approved |
| 052-204-2301 | Perform Switching, Blocking and Tagging Procedures | 052 - Engineer (Individual) | Approved |
| 052-204-1212 | Operate a Bucket/Material Handler Truck | 052 - Engineer (Individual) | TMD Review |

**Supported Collective Tasks :**

| Task Number | Title | Proponent | Status |
|---|---|---|---|
| 05-3-5702 | Created from Template: Install Underground Electrical-Power Distribution Equipment | 05 - Engineers (Collective) | Analysis |

| | | | |
|---|---|---|---|
| 05-3-5725 | Install Aerial Electrical Power Distribution Equipment | 05 - Engineers (Collective) | Approved |
| 05-3-5730 | Perform Electrical-Power Generation Equipment Organizational Maintenance Operations | 05 - Engineers (Collective) | Approved |
| 05-3-5724 | Install Expedient, Surface-Laid, Electrical-Power Distribution Equipment | 05 - Engineers (Collective) | Approved |
| 05-3-5729 | Operate Power Generation and Distribution Equipment | 05 - Engineers (Collective) | Approved |
| 05-3-5703 | Perform Electrical Safety Systems Testing and Maintenance | 05 - Engineers (Collective) | Approved |
| 05-3-5731 | Perform Electrical-Power, Distribution Equipment Organizational Maintenance Operations | 05 - Engineers (Collective) | Approved |
| 05-3-5700 | Created from Template: Install Nonstandard Low-Voltage, Electrical-Power Distribution Equipment | 05 - Engineers (Collective) | Analysis |
| 05-3-5713 | Perform a Power Distribution System Maintenance Survey | 05 - Engineers (Collective) | Approved |
| 05-3-5727 | Install Underground Distribution Equipment | 05 - Engineers (Collective) | Approved |
| 05-3-5702 | Install Underground Electrical-Power Distribution Equipment | 05 - Engineers (Collective) | Approved |
| 05-3-5704 | Created from Template: Perform Nonorganic Equipment Power Distribution Maintenance Operations | 05 - Engineers (Collective) | Analysis |
| 05-3-5700 | Install Nonstandard Low-Voltage, Electrical-Power Distribution Equipment | 05 - Engineers (Collective) | Approved |
| 05-3-5700 | Created from Template: Install Nonstandard Low-Voltage, Electrical-Power Distribution Equipment | 05 - Engineers (Collective) | Analysis |
| 05-3-5723 | Install Prime Power Generation Equipment | 05 - Engineers (Collective) | Approved |
| 05-3-5719 | Perform Power Plant Generation System Maintenance Technical Assistance | 05 - Engineers (Collective) | Approved |
| 05-3-5704 | Perform Nonorganic Equipment Power Distribution Maintenance Operations | 05 - Engineers (Collective) | Approved |

**ICTL Data :**

| ICTL Title | Personnel Type | MOS Data |
|---|---|---|
| 12Q20, Power Line Distribution Specialist, skill level 2 | Enlisted | MOS: 12Q, Skill Level: SL2 |
| 12P2O ASI U4, Prime Power Production Specialist, skill level 2 | Enlisted | MOS: 12P, Skill Level: SL2, ASI: U4 |